

WHAT IS CLAIMED IS:

1. Apparatus for dynamically pressure testing an article comprising:

a first cylinder containing a first fluid;

a first piston in contact with the first fluid and movable within said first cylinder;

a shaker table mounting said first cylinder and said first piston for vibrating the first cylinder and first piston and generating pressure pulses in said first fluid;

a second fluid cylinder in communication with said first fluid, said second cylinder and a second piston movably carried by said second cylinder being mounted independently of said shaker table, said second piston in contact with the first fluid on one side thereof enabling the generated pressure pulses to vibrate said second piston; and

a second fluid in said second cylinder in contact with said second piston on an opposite side thereof from said one side for receiving pressure pulses generated by the vibratory movement of said second piston and transmitting the second pressure pulses to an article undergoing dynamic pressure testing in contact with the second fluid.

2. Apparatus according to claim 1 including a weight of predetermined magnitude mounted on said first piston.

3. Apparatus according to claim 1 including a plurality of independent weights for selective mounting on said first piston to alter the magnitude of the generated pressure pulses.

4. Apparatus according to claim 1 wherein said second fluid is a caustic or corrosive fluid and said second piston includes seals for sealing said first and second fluids from one another.

5. Apparatus according to claim 1 wherein said second cylinder includes means for mounting the article thereto.

6. Apparatus according to claim 1 including at least one rod secured to said first cylinder and a spring cooperable between said rod and said piston to enable relative vibration between said first piston and said first cylinder.

7. Apparatus for dynamically pressure testing an article comprising:

a first cylinder containing a first fluid;

a first piston in contact with the first fluid and movable within said first cylinder;

means for vibrating said first cylinder and said first piston to generate pressure pulses in said first fluid;

a second fluid cylinder in communication with said first fluid, said second cylinder and a second piston movably carried by said second cylinder being mounted independently of said vibrating means, said second piston in contact with the first fluid on one side thereof, enabling the generated pressure pulses to vibrate said second piston; and

a second fluid in said second cylinder in contact with said second piston on an opposite side thereof from said one side for receiving pressure pulses generated by the vibratory movement of said second piston and transmitting the second pressure pulses to an article undergoing dynamic pressure testing in contact with the second fluid.

8. Apparatus according to claim 7 including a weight of predetermined magnitude mounted on said first piston.

9. Apparatus according to claim 7 including a plurality of independent weights for selective mounting on said first piston to alter the magnitude of the generated pressure pulses.

10. Apparatus according to claim 7 wherein said second fluid is a caustic or corrosive fluid and said second piston includes seals for sealing said first and second fluids from one another.

11. Apparatus according to claim 7 wherein said second cylinder includes means for mounting the article thereto.

12. Apparatus according to claim 7 including at least one rod secured to said first cylinder and a spring cooperable between said rod and said piston to enable relative vibration between said first piston and said first cylinder.

13. A method for dynamically pressure testing an article comprising the steps of:

providing a first weighted piston and a first cylinder with a first fluid in contact with said piston;

vibrating said first piston and said first cylinder to generate pressure pulses in said first fluid;

transmitting the pressure pulses of said first fluid to a second piston mounted in a housing fixed against vibratory movement to vibrate said second piston in response thereto; and

fixing the article to said housing with said article in contact with a second fluid responsive to vibratory movement of said second piston to transmit pressure pulses to said article.

14. A method according to claim 13 including providing a caustic or corrosive second fluid.

15. A method according to claim 13 including selectively varying the magnitude of the pressure pulses acting on said second piston.

16. A method according to claim 13 including selectively applying a plurality of weights to said first piston to vary the magnitude of the pressure pulses of the first fluid on the second piston.

17. A method according to claim 13 including providing seals about the second piston to seal the first and second fluids from one another.